Technology and Science Education

Introduction

UW-Stout is the only university or college in the state of Wisconsin offering a Bachelor of Science degree combining Technology and Science Education, offering students a unique opportunity. Students will participate in a collaborative, interdisciplinary degree program that prepares them as teachers in the overlapping fields of science and technology. Coursework in the program leads to a dual teaching certification in technology education with a major or minor certification in biology, chemistry, or physics. To fulfill the requirements of the program, students will complete general education, technology, science, and education courses. Students will also complete required pedagogical courses specifically in technology and science education. Pre-student teaching experiences in both middle and high school classrooms as well as a semester-long student teaching experience will be required.

General Requirements
Bachelor of Science Degree

Total for graduation	137 credits
General Education	41 credits
Major Studies	96 credits

Program Requirements

General Education

41 credits required

A. Communication Skills — 8 credits

ENGL-101	Freshman English – Composition *or*	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing *or*	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	2

B. Analytic Reasoning — 7 credits

MATH-153	Calculus I	4
STAT-320	Statistical Methods	3

C. Health and Physical Education — 2 credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts* — 9 Credits

LIT-XXX	*Any Literature*	3
XXX-XXX	*Any Creative/Performing Arts*	3

*Remaining course must be from areas including art history, creative arts, history, literature, music appreciation, per forming arts or philosophy. * Either HIST-210 Modern World must be taken under this category or ANTH-220 Cultural Anthropology must be taken under Category E.*

E. Social and Behavioral Sciences * — 9 Credits

POLS-210	American Government	3
PSYC-110	General Psychology	3

*Remaining course must be from areas of anthropology, economics, geography, political science, psychology or sociology. * See previous note under Category D.*

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: **www.uwstout.edu/soe/students/requirements-benchI.shtml**.

- Pass the Pre-Professional Skills Test (*PPST*)
- Attain a 2.75 cumulative grade point average
- Pass the required teacher background check
- Earn a grade of at least 2.00 (*C*) in ENGL-101 and ENGL-102 or ENGL-111 and ENGL-112.
- Earn a minimum grade of 2.00 (*C*) in SPCOM-100 Fundamentals of Speech.
- Earn a minimum grade of 2.00 (*C*) in STMED-160 Introduction to Technology and Science Education
- Complete EDUC-326 Foundations of Education
- Complete General Education Technology requirement
- Satisfactory rating on Benchmark I Portfolio Assessment rubric
- Satisfactory rating on Benchmark I Student Interview

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: **www.uwstout.edu/soe/students/requirements-benchI.shtml**.

- Complete Application for Student Teaching form
- Maintain a 2.75 grade point average
- Pass Content Knowledge Exam (*Praxis II*)
- Receive clearance through an updated background check
- Complete a satisfactory tuberculosis (*TB*) test
- Receive satisfactory portfolio assessment by faculty
- Receive satisfactory rating on Benchmark II Student Interview
- Submit copies of resume to the School of Education prior to student teaching

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: **www.uwstout.edu/soe/students/requirements-benchI.shtml**.

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at two levels: Middle School and High School.
- Receive a satisfactory student teaching assessment

F. Natural Sciences (with Lab) — 4 credits

BIO-111	Science, Society and Environment	4

Note: Students must also complete a physical science course.

G. Technology — 2 credits

Major Requirements

96 credits required

Education — 13 credits

Grade of "C' or better required for all courses.

EDUC-303	Education Psychology	3
EDUC-326	Foundations of Education	2
EDUC-336	Multiculturalism: Issues and Perspective	2
EDUC-376	Field Experience: Cross-cultural	1
EDUC-382	Secondary Reading and Language	2
SPED-430	Inclusion of Students with Exceptional Needs	3

Technology Teacher Education Courses — 33 credits

Grade of "C' or better required for all courses.

STMED-160	Introduction to Technology and Science Education	3
STMED-260	Curriculum, Methods and Assessment for Science and Technology Education	3
STMED-XXX	Pre-Student Teaching	1
STMED-390	Laboratory and Classroom Management in Science and Technology	3
STMED-409	Student Teaching	16
STMED-XXX	Advanced Curriculum Methods and Assessment for Technology Education	3
TECED-325	Technology for Elementary School Children	2
STMED-340	Middle School Technology Education	2

The Designed World — 32 credits

AEC-172	Construction Technology	3
ELEC-204	Electricity/Electronics Fundamentals	3
GCM-141	Graphic Communications	3
INMGT-314	Industrial Enterprise Practicum	3
MFGT-110	Materials and Manufacturing Processes	3
MFGT-204	Polymer Processes	3
RD-205	Design for Industry	3
TRANS-XXX	Trans and Energy	3
XXX-XXX	Mechatronics	2

Take one of the following courses:

MFGT-202	Welding and Casting Processes	3
MFGT-203	Machining Metal Forming Processes	3

Take one of the following courses:

AEC-131	Architectural Graphics	3
CADD-112	Principles Engineering Drawing	3

Science Courses — 18 credit minimum

*Choose at least one **major** or one **minor** science certification from the list below:*

Biology Major Certification (28 credits)

BIO-135	Organismal Biology	4
BIO-136	College Molecular Cell Biology I	5
BIO-332	Genetics	3
BIO-350	Ecology	3

Choose 13 additional credits of approved biology selectives above the introductory level.

Chemistry Major Certification (28 credits)

CHEM-135	College Chemistry I	5
CHEM-136	College Chemistry II	5
CHEM-201	Organic Chemistry	4
CHEM-331	Quantitative Analysis	3

Choose 11 additional credits of approved chemistry selectives above the introductory level.

Physics Major Certification (28 credits)

PHYS-241	College Physics I	5
PHYS-242	College Physics II	5
PHYS-250	The Physics of Light and Color	3
ELEC-260	Electrical Circuits	3

Choose 12 additional credits of approved physics selectives above the introductory level.

Biology Minor Certification (18 credits)

BIO-135	Organismal Biology	4
BIO-136	College Molecular Cell Biology I	5

Choose 9 additional credits of approved biology selectives above the introductory level.

Chemistry Minor Certification (18 credits)

CHEM-135	College Chemistry I	5
CHEM-136	College Chemistry II	5

Choose 8 additional credits of approved chemistry selectives above the introductory level.

Physics Minor Certification (18 credits)

PHYS-241	College Physics I	5
PHYS-242	College Physics II	5

Choose 8 additional credits of approved physics selectives above the introductory level.